Remarks

Claims 1-19, and 28-31 have been canceled

Claims 20-23 and 25-27 have been amended for clarification of the invention. The following terms have been changes, crude carboxylic acid slurry has been changed to carboxylic acid slurry composition; slurry product has been changed to slurry composition; staged oxidation product has been changed to staged oxidation composition; crystallized product has been change to crystallized composition; cooled purified carboxylic acid slurry has been changed to cooled carboxylic acid slurry composition; purified carboxylic acid product has been changed to purified carboxylic acid composition.

Claims 20 and 21 for clarification of the invention, have been amended to include the additional limitation that impurities comprises 4-carboxybenzaldehyde, trimellitic acid or 2,6 dicarboxyfluorenone. Support for this limitation can be found on page 9, lines 11-14 of applicants' disclosure. In addition, for clarification of the invention, the term substantial absence has been replaced with less than 5% by weight. Support for this limitation can be found on page 10, lines 19-20 of applicants' disclosure.

New claims 32-38 have been added to include the additional limitation of the previous claims of oxidizing at a temperature between 120°C and 200°C. Support for this limitation can be found on page 9, lines 19-21 of applicants' disclosure.

Issue I – 35. U.S.C. 112 first paragraph rejections.

Claims 14, 20 and 21 were rejected under 35 USC 112 first paragraph. Claims 1-19 have been canceled, and claims 20 and 21 have been amended to advance prosecution. Applicants' respectfully request that the examiner remove the 112, paragraph 1 rejection on claims 20 and 21.

Issue II - 35 U.S.C 112 second paragraph rejections

Claims 1-31 were rejected under 35 U.S.C 112, second paragraph, as being indefinite. Claims 1-19 have been canceled, the remaining claims have been amended with the additional limitation that impurities comprises comprise 4-carboxybenzaldehyde, trimellitic acid, or 2,6-dicarboxyfluorenone to advance prosecution. Applicants' respectfully request that the rejection on pending claims be removed.

Issue III Rejection under 35 U.S.C. 102(b)

Claims 1-4, 7-9, and 29-31 were rejected as being anticipated by Zeitlin et al or Scott et al. To advance prosecution, these claims have been canceled by applicants

Issue IV: Obviousness Rejection (35 U.S.C 103)

Claims 1-19 were rejected as being unpatentable over Scott et al (U.S. 4,158,738) in view of Zeitlin et al (U.S. 5,095,146). In addition claims 20-31 were rejection as being unpatentable over Scott et al (U.S. 4,158,738) in view of Zeitlin et.al. (U.S. 5,095,146) and D.H. Meyer (U.S 3,584,039). Applicants wish to respectfully traverse the rejection for the pending claims for the reason that the examiner has not established a *prima facie* case of obviousness.

Applicants would like to respectfully point out that in order for the examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations(MPEP § 2143).

Applicants' maintain that there is no motivation to combine the references. However, arguing against the combination of references is moot because the combination does not teach every limitation of applicant's amended claims.

For example, the combination of references, at least does not teach step (a) and step (b) in claim 20. These steps are as follows:

"(a) removing in a solid-liquid displacement zone impurities from a crude carboxylic acid slurry composition to form a slurry composition; wherein said crude carboxylic acid slurry composition comprises at least one carboxylic acid; wherein there is less than 5 percent by weight terephthalic acid and isophthalic acid in said crude

carboxylic acid slurry composition; wherein said impurities comprise 4-carboxybenzaldehyde, trimellitic acid, or 2,6-dicarboxyfluorenone;

(b) oxidizing said slurry composition in a staged oxidation zone to form a staged oxidation composition; wherein said oxidizing is conducted at a temperature between about 190°C to about 280°C."

These two steps are in all the claims currently pending. Applicants respectfully state that just because the prior art suggests a result does not mean that it would meet the standard for a prima facie case of obviousness. In this case, the two cited references teach about impurity reduction, but the references do not discuss the means used in applicants' invention. Zetlin et al discloses adding water to a crystallizer, but not a solid-liquid displace zone between the primary and secondary oxidizer. Scott et al discloses a TPA process and specifically mentions a low temperature centrifuge process. Neither references, discloses details about the solid-liquid displacement zone of applicants' invention or the staged oxidation zone. In re Rockwell International Corp (147 F.3d 1358, 47 USPQ 2d 1027 (Fed Cir. 1998)) states that drawing inferences from the combined teaching of prior art is improper. It also states that "because none of the cited four prior art patents alone taught a patent claim limitation, Defendants had the burden to prove that combining these references would suggest one of ordinary skill in the art how to perform the missing process step with a reasonable likelihood of success."

Therefore, the examiner has the burden to prove how combination of these references would suggest to one skilled in the art the missing process steps. As previously stated, both references cited by the examiner are completely silent on the liquor exchange method used by applicants' invention. Indeed, there is nothing in these

two references that would motivate one skilled in the art to perform a high temperature liquor exchange as well as a liquor exchange between oxidation and digestion. The cited references even if combined only teach adding water to a centrifuge in the crystallizers to remove impurities.

If the examiner is taking official notice of the missing claim elements, applicants respectfully disagree. MPEP 2144.03 states "Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). Therefore, if the examiner has taken this position, applicants maintain that this notice is not proper since the missing elements not taught by the references are not common knowledge in the art and are not capable of instant and unquestionable demonstration for at least the reasons already stated.

In summary, applicants state that the reading of the cited art would not lead one skilled in the art to perform the missing elements of the present invention, such as the solid liquid displacement zone and the staged oxidation zone, and thus fails to meet the standard for a *prima facie* case of obviousness.

Conclusion

The application is in condition for allowance. The Examiner is respectfully requested to reconsider the rejection(s), remove all rejections, and pass the application to issuance.

Respectfully submitted,

Steven A. Owen
Registration No. 50,355

3/23/2005
Date

Eastman Chemical Company
P.O. Box 511
Kingsport, Tennessee 37662

Phone: (423) 229-5534
FAX: (423) 229-1239

CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this paper (along with any paper(s) referred to as being attached or enclosed) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

Kristi Huff

3/24/05
Date